CLASS VI RELATIVE PERMEABILITY

ELK HILLS A1-A2 PROJECT

Relative Permeability

With gas, oil and water all present in the reservoir, three-phase relative permeability relationships are the key variables that determine the flow characteristics of each component and/or phase. Two sets of two-phase relative permeability data are needed to determine three-phase relative permeability: water-oil and gas-oil systems, giving Krw, Krow, Krg, and Krog as a function of water or liquid saturation. Data acquired from core flood and/or capillary pressure testing determines these relationships. Figure 1 shows the relative permeability curves used in the computational modeling.

Figure 1: Relative permeability curves for Krg-Krog and Krw-Krow used in the computational model study.